

Code 923 Biospheric Sciences Branch Highlights for Jan.-Feb. 2003

**** Terra Deep Space and Lunar Calibration Maneuvers Proceeding**

The maneuver of the Terra spacecraft designed to allow the instruments to view cold deep space and the lunar surface has been approved by NASA HQ. Letters from Earth Science Enterprise Associate Administrator, Dr. Asrar, have been sent to the NASA Administrator, the GSFC Center Director and our international partners in Japan and Canada informing them of this action. Current plans call for a maneuver to occur on March 26, 2003 to provide a deep space look without the moon. A second maneuver to view the almost fully illuminated lunar surface is planned for April 14. A third maneuver will be conducted at a later date contingent on the results of the first two. The objectives of these maneuvers include: provide data to determine scan angle dependent offsets for the CERES instruments to enable them to meet mission accuracy requirements and explain differences with similar instruments on other missions; provide response versus scan angle data for the MODIS instrument and enable cross comparison with other instruments; provide for improved radiometric characterization and help correct for short-wave crosstalk in ASTER; verify point spread function response and camera to camera registration of MISR. The Earth Science Mission Operations Project at GSFC is responsible for implementation of the maneuvers to be conducted by the Terra Flight Operations Team with support from all 5 instrument teams, the Terra Project Science Office, and key personnel from the spacecraft manufacturer.

**** Landsat Data Continuity Mission (LDCM) Implementation Phase Request for Proposals (RFP Released on Monday, January 06)**

The LDCM is the follow-on mission to Landsat 7. Unlike the data acquired by the government-operated Landsat 7 observatory, LDCM data will be acquired by a privately-owned and commercially-operated remote sensing satellite system. NASA will procure data meeting NASA specifications from the commercial operator of the system and will ensure the delivery of the data to the United States Geological Survey (USGS). The USGS will archive the LDCM data at its EROS Data Center (EDC) in Sioux Falls, South Dakota and will provide users with Level 1 (radiometrically corrected and cartographically-registered) data products to Landsat data users. LDCM data will be available from the EDC beginning in March 2007.

Release of the Implementation Phase RFP follows a nine-month formulation phase. Two private companies were competitively selected by NASA to develop preliminary system designs, operating concepts, and business plans during the formulation period. These two companies were Resource21 and DigitalGlobe. The formulation phase culminated with each company conducting a preliminary design review in November. The Implementation Phase RFP and evaluation process will result in the selection of a single company to acquire and deliver data for a five-year period with an option for a second five-year period.

The Implementation Phase RFP was released on Monday, January 06. Bidders had three days to provide the contracting officer with a letter stating their intent to propose. Proposals are due February 20. The RFP can be found at the following web site:
<http://prod.nais.nasa.gov/cgi-bin/eps/sol.cgi?acqid=102577>

** EO-1 imagery of the La Plata tornado composes the centerfold in Bob Ryan's 2003 Almanac

EO-1 coverage of the La Plata Tornado provided the basis for the lead article in Bob Ryan's 2003 Almanac. Bob Ryan is the Science Editor for NBC 4 and the soft covered almanac is on sale at Giant Supermarkets throughout the Washington Metropolitan Area (including northern Virginia and suburban Maryland). of this widely distributed publication.

** First graduate (master's) thesis based primarily on EO-1 data

The first (master's) thesis primarily based on EO-1 data was recently successfully defended at Ohio State University by a student of Carolyn J. Merry, a professor in the Department of Civil and Environmental Engineering and Geodetic Science. A letter from Professor Merry outlining some details follows:

Dear Steve:

Enclosed is a master's thesis - A detection algorithm for road feature extraction using EO-1 hyperspectral images - that was recently defended by my graduate student Tzu-Lung Sun.

"I particularly want to thank you for providing the EO-1 data over the Ohio site that he used in his research. I believe he found some interesting results with the EO-1 data, indicating that hyperspectral data improves the road extraction process over traditional algorithms that use panchromatic imagery.

Again, thanks very much to you and Tom Brakke for providing the EO-1 imagery.

Sincerely,
Carolyn J. Merry"

Dr. Carolyn Merry was a visiting professor for a year in the Biospheric Sciences Branch (Code 923) in 1999.